

1/30/04

**Listing of Claims:**

1 ~~15~~. (Previously Presented) A method of screening candidate molecules for the ability to disrupt viral looping/linking factors comprising:

- (a) adding a candidate molecule to a mammalian cell culture;
- (b) providing a control mammalian cell culture without the candidate molecule, wherein the cell cultures of both (a) and (b) comprise viral looping/linking factors, wherein the factors comprise DNA-binding proteins that can self-associate, and nucleic acid molecules comprising at least two binding sites for the factors, wherein the sites are linked by a looping/linking factor;
- (c) allowing said candidate molecule to interact with the viral looping/linking factor present in the mammalian cell culture of step (a); and
- (d) <sup>directly</sup> analyzing the factor for inhibition by the candidate molecule and comparing the result to the results using the control culture, wherein the candidate molecule inhibits protein:protein self-associate between factors as demonstrated by the factor being unable to mediate linking in the presence of the candidate molecule.

4 ~~17~~. (Currently Amended) ~~The method of claim 15~~ A method of screening candidate molecules for the ability to disrupt viral looping/linking factors comprising:

- (a) adding a candidate molecule to a mammalian cell culture;
- (b) providing a control mammalian cell culture without the candidate molecule, wherein the cell cultures of both (a) and (b) comprise viral looping/linking factors, wherein the factors comprise DNA-binding proteins that can self-associate, and nucleic acid

molecules comprising at least two binding sites for the factors, wherein the sites are linked by a looping/linking factor;

(c) allowing said candidate molecule to interact with the viral looping/linking factor present in the mammalian cell culture of step (a); and

(d) analyzing the factor for inhibition by the candidate molecule and comparing the result to the results using the control culture, wherein the candidate molecule inhibits protein:protein self-associate between factors as demonstrated by the factor being unable to mediate linking in the presence of the candidate molecule, wherein the analysis of step (d) is a gel shift assay.

§ 18. (Currently Amended) The method of claim 15 A method of screening candidate molecules for the ability to disrupt viral looping/linking factors comprising:

(a) adding a candidate molecule to a mammalian cell culture;

(b) providing a control mammalian cell culture without the candidate molecule, wherein the cell cultures of both (a) and (b) comprise viral looping/linking factors, wherein the factors comprise DNA-binding proteins that can self-associate, and nucleic acid molecules comprising at least two binding sites for the factors, wherein the sites are linked by a looping/linking factor;

(c) allowing said candidate molecule to interact with the viral looping/linking factor present in the mammalian cell culture of step (a); and

(d) analyzing the factor for inhibition by the candidate molecule and comparing the result to the results using the control culture, wherein the candidate molecule inhibits protein:protein self-associate between factors as demonstrated by the factor being

Appl. No. 09/808,517  
Amdt. Dated January 27, 2004  
Reply to Office Action of July 29, 2003

unable to mediate linking in the presence of the candidate molecule, wherein the analysis of  
step (d) is a promoter activation assay.